

Name: \_\_\_\_\_

**p1103: Factoring with box when  $a = \text{prime}$  (v11)**

**Example**

Use the box to factor  $2x^2 - 9x - 18$ .

Guess and check, based on factor pairs of  $-18$ , until you find the pair that results in a linear coefficient of  $-9$  after combining like terms.

| *  | x      |        |
|----|--------|--------|
| 2x | $2x^2$ | $-12x$ |
| 3  | $3x$   | $-18$  |

$2x^2 - 12x + 3x - 18$

Combine like terms.

$2x^2 - 9x - 18$

ANSWER:  $(2x + 3)(x - 6)$

**Question 1**

Use the box to factor  $5x^2 + 34x + 45$ .

| *  | x      |    |
|----|--------|----|
| 5x | $5x^2$ |    |
|    |        | 45 |

ANSWER:

### Question 2

Use the box to factor  $7x^2 - 43x - 42$ .

|    |        |     |
|----|--------|-----|
| *  | x      |     |
| 7x | $7x^2$ |     |
|    |        | -42 |

ANSWER:

### Question 3

Use the box to factor  $3x^2 - 28x + 49$ .

|   |  |  |
|---|--|--|
| * |  |  |
|   |  |  |
|   |  |  |

ANSWER: